

Package ‘jmvReadWrite’

January 20, 2022

Title Read and Write 'jamovi' Files ('.omv')

Version 0.2.4

Description The free and open a statistical spreadsheet 'jamovi' (www.jamovi.org) aims to make statistical analyses easy and intuitive. 'jamovi' produces syntax that can directly be used in R (in connection with the R-package 'jmv'). Having import / export routines for the data files 'jamovi' produces ('.omv') permits an easy transfer of analyses between 'jamovi' and R.

License AGPL-3

Encoding UTF-8

LazyData true

RoxygenNote 7.1.2

VignetteBuilder knitr

Language en-GB

URL <https://sjentsch.github.io/jmvReadWrite/>

BugReports <https://github.com/sjentsch/jmvReadWrite/issues>

Depends R (>= 3.5.0)

Imports rjson, zip

Suggests jmv, jmvcore, knitr, rmarkdown, RProtoBuf

NeedsCompilation no

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AlbumSales	<i>Imagine that you worked for a record company and that your boss was interested in predicting album sales from advertising.</i>
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Description

The data set is fictional and was constructed by Andy Field who therefore owns the copyright. The data set is also publicly available on the website that accompanies Andy Field's book, <https://edge.sagepub.com/field5e>. Without Andy Field's explicit consent, this data set may not be distributed for commercial purposes, this data set may not be edited, and this data set may not be presented without acknowledging its source (i.e., the terms of a CC BY-NC-ND license).

Usage

AlbumSales

Format

A data.frame with 60 rows, each one representing a different album, and 5 variables

Adverts numericAmount (in thousands of pounds) spent promoting the album before release

Airplay integerHow many times songs from the album were played on a prominent national radio station in the week before release

Image integerHow attractive people found the band's image (out of 10)

Sales integerSales (in thousands) of each album in the week after release

Details

Reference: Field, A. P. (2017). *Discovering Statistics Using IBM SPSS Statistics* (5th ed.). Sage.

bfi_sample	<i>Twenty-five personality self-report items taken from the International Personality Item Pool</i>
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Description

The data set contains responses from 250 participants filling in twenty-five personality self-report items taken from the International Personality Item Pool (<https://ipip.ori.org>) as part of the Synthetic Aperture Personality Assessment (SAPA) web-based personality assessment (<https://sapa-project.org>) project. The 25 items are organized by five putative factors: Agreeableness (A1 to A5), Conscientiousness (C1 to C5), Extraversion (E1 to E5), Neuroticism (N1 to N5), and Openness (N1 to N5). The items were short phrases that the respondent should answer by indicating how accurately the statement describes their typical behaviour or attitude. Responses were collected using a 6-point scale: 1 - Very inaccurate, 2 - Moderately inaccurate, 3 - Slightly inaccurate, 4 - Slightly accurate, 5 - Moderately accurate, 6 - Very accurate.

Usage

bfi_sample

Format

A data.frame with 254 rows (250 original respondents, 4 manually generated for testing) and 33 variables

ID character Respondent ID

A1 integer Am indifferent to the feelings of others. (reversed)

A2 integer Inquire about others' well-being.

A3 integer Know how to comfort others.

A4 integer Love children.

A5 integer Make people feel at ease.

C1 integer Am exacting in my work.

C2 integer Continue until everything is perfect.

C3 integer Do things according to a plan.

C4 integer Do things in a half-way manner. (reversed)

C5 integer Waste my time. (reversed)

E1 integer Don't talk a lot. (reversed)

E2 integer Find it difficult to approach others. (reversed)

E3 integer Know how to captivate people.

E4 integer Make friends easily.

E5 integer Take charge.

N1 integer Get angry easily.

N2 integerGet irritated easily.
N3 integerHave frequent mood swings.
N4 integerOften feel blue.
N5 integerPanic easily.
O1 integerAm full of ideas.
O2 integerAvoid difficult reading material. (reversed)
O3 integerCarry the conversation to a higher level.
O4 integerSpend time reflecting on things.
O5 integerWill not probe deeply into a subject. (reversed)
gender factorGender of the respondent (female, male)
age integerAge of the respondent (years)
AD numericExponent of age (computed: EXP(age))
AF factorRandom data (for testing)
AG factorRandom data (for testing)
age_tr factorAge of the respondent (transformed, as decades: 1 - 10-19, 2 - 20-29, 3 - 30-39, 4 - 40-49, 5 - 50-59, 6 - 60 and over)
ID2 characterRespondent ID (for testing; "A" + random-generated 5-digit-code)

bfi_sample2	<i>Twenty-five personality self-report items taken from the International Personality Item Pool (includes jamovi-attributes; should result in a file identical to bfi_sample2.omv under "extdata" when written with write_omv)</i>
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Description

The data set contains responses from 250 participants filling in twenty-five personality self-report items taken from the International Personality Item Pool (<https://ipip.ori.org>) as part of the Synthetic Aperture Personality Assessment (SAPA) web-based personality assessment (<https://sapa-project.org>) project. The 25 items are organized by five putative factors: Agreeableness (A1 to A5), Conscientiousness (C1 to C5), Extraversion (E1 to E5), Neuroticism (N1 to N5), and Openness (N1 to N5). The items were short phrases that the respondent should answer by indicating how accurately the statement describes their typical behaviour or attitude. Responses were collected using a 6-point scale: 1 - Very inaccurate, 2 - Moderately inaccurate, 3 - Slightly inaccurate, 4 - Slightly accurate, 5 - Moderately accurate, 6 - Very accurate. The data set includes the jamovi-attributes. It is supposed to result in an identical file compared to the bfi_sample2.omv-file contained in the extdata-directory of the package when written with write_omv.

Usage

bfi_sample2

Format

A data.frame with 250 rows and 29 variables

ID characterRespondent ID

A1 integerAm indifferent to the feelings of others. (reversed)

A2 integerInquire about others' well-being.

A3 integerKnow how to comfort others.

A4 integerLove children.

A5 integerMake people feel at ease.

C1 integerAm exacting in my work.

C2 integerContinue until everything is perfect.

C3 integerDo things according to a plan.

C4 integerDo things in a half-way manner. (reversed)

C5 integerWaste my time. (reversed)

E1 integerDon't talk a lot. (reversed)

E2 integerFind it difficult to approach others. (reversed)

E3 integerKnow how to captivate people.

E4 integerMake friends easily.

E5 integerTake charge.

N1 integerGet angry easily.

N2 integerGet irritated easily.

N3 integerHave frequent mood swings.

N4 integerOften feel blue.

N5 integerPanic easily.

O1 integerAm full of ideas.

O2 integerAvoid difficult reading material. (reversed)

O3 integerCarry the conversation to a higher level.

O4 integerSpend time reflecting on things.

O5 integerWill not probe deeply into a subject. (reversed)

gender factorGender of the respondent (female, male)

age integerAge of the respondent (years)

ID2 characterRespondent ID (for testing; "A" + random-generated 4-digit-code)

read_omv	<i>Read files created of the statistical spreadsheet 'jamovi' (www.jamovi.org)</i>
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Description

Read files created of the statistical spreadsheet 'jamovi' (www.jamovi.org)

Usage

```
read_omv(
  fleNme = "",
  useFlt = FALSE,
  rmMsVl = FALSE,
  sveAtt = FALSE,
  getSyn = FALSE,
  getHTM = FALSE
)
```

Arguments

fleNme	name (including the path, if required) of the 'jamovi'-file to be read ("FILE-NAME.omv"; default: "")
useFlt	apply filters (remove the lines where the filter is set to 0; default: FALSE)
rmMsVl	remove values defined as missing values (replace them with NA; default - FALSE)
sveAtt	store attributes that are not required in the data set (if you want to write the same data set using write_omv; default – FALSE)
getSyn	extract syntax from the analyses in the 'jamovi'-file and store it in the attribute "syntax" (default – FALSE)
getHTM	store index.html in the attribute "HTML" (default – FALSE)

Value

data frame (can be directly used with functions included in the R-package 'jmv' and syntax from 'jamovi'; also compatible with the format of the R-package "foreign")

Examples

```
## Not run:
library(jmvReadWrite);
fleOMV <- system.file("extdata", "ToothGrowth.omv", package = "jmvReadWrite");
data <- read_omv(fleNme = fleOMV, getSyn = TRUE);
# if the syntax couldn't be extracted, an empty list - length = 0 - is returned,
# otherwise, the commands are shown and the first analysis is run, with the output
# from the second analysis being assigned to the variable result
if (length(attr(data, 'syntax')) >= 1) {
```

```

print(attr(data, "syntax"));
# the print-function is only used to force devtools::run_examples() to show output
eval(parse(text=paste0('result = ', attr(data, 'syntax')[[1]])));
# without assigning the output to a variable, the command would be:
# eval(parse(text=attr(data, 'syntax')[[1]]))
print(names(result));
print(result$main);
# -> "main"      "assump"      "contrasts" "postHoc"      "emm"      "residsOV"
# (the names of the six output tables)
}

## End(Not run)

```

ToothGrowth

The Effect of Vitamin C on Tooth Growth in Guinea Pigs

Description

The Effect of Vitamin C on Tooth Growth in Guinea Pigs

Usage

ToothGrowth

Format

A data.frame with 60 rows and 6 variables

logLen numericNatural logarithm of the tooth length (len)

supp - Transform 1 factorTransformation of the supplement type (factor to numerical: VC = 1; OJ = 2)

len numericTooth length

supp factorSupplement type (VC: Vitamin C or OJ: Orange juice)

dose numericDose in grams / day

write_omv

*Write files to be used with the statistical spreadsheet 'jamovi'
(www.jamovi.org)*

Description

Write files to be used with the statistical spreadsheet 'jamovi' (www.jamovi.org)

Usage

```
write_omv(dtaFrm = NULL, fleNme = "", retDbg = FALSE)
```

Arguments

dtaFrm	Data frame to be exported (default: NULL)
fleNme	Name / position of the output file to be generated ("FILENAME.omv"; default: "")
retDbg	Whether to return a list with debugging information (see Value; default: FALSE)

Details

jamovi has a specific measurement level / type "ID" (in addition to the "standard" ones "Nominal", "Ordinal", and "Continuous"). "ID" is used for columns that contain some form of ID (e.g., a participant code). In order to set a variable of your data frame to "ID", you have to manually set an attribute `jmv-id` (e.g., `attr(dtaFrm$column, "jmv-id") = TRUE`).

Value

a list (if `retDbg == TRUE`), containing the meta data (`mtaDta`, `metadata.json` in the OMV-file), the extended data (`xtdDta`, `xdata.json` in the OMV-file) and the original data frame (`dtaFrm`)

Examples

```
## Not run:
library(jmvReadWrite);

# use the data set "ToothGrowth" and, if it exists, write it as jamovi-file using write_omv()
data("ToothGrowth");
wrtDta = write_omv(ToothGrowth, "Trial.omv", retDbg = TRUE);
print(names(wrtDta));
# the print-function is only used to force devtools::run_examples() to show output
# -> "mtaDta" "xtdDta" "dtaFrm"
# returns a list with the metadata (mtaDta, e.g., column and data type),
# the extended data (xtdDta, e.g., variable lables), and the data frame (dtaFrm)
# the purpose of these variables is merely for checking (understanding the file format)
# and debugging

# check whether the file was written to the disk, get the file information (size, etc.)
# and delete the file afterwards
print(list.files(".", "Trial.omv"));
# -> "Trial.omv"
print(file.info("Trial.omv")$size);
# -> 2111 (size may differ on different OSes)
unlink("Trial.omv");

## End(Not run)
```


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